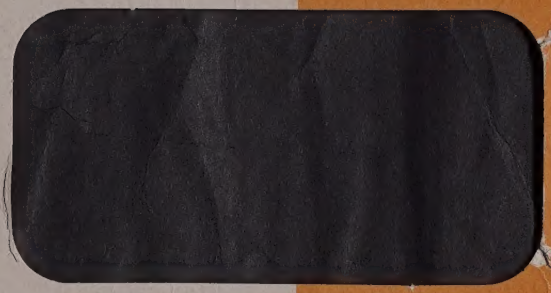
PRICE $5.00

POWER SUPPLY



INSTRUCTION MANUAL

kepco inc.®

131-38 SANFORD AVENUE • FLUSHING, N. Y. 11352
Area Code 212 IN 1-7000 • TWX # 212-539-6623

INSTRUCTION MANUAL

MODULAR DC
POWER SUPPLY

MODEL PAX 7-1 (C)

SERIAL NO E-28121

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REPLACEMENT PARTS

SERVICE DIAGRAMS

SCHEMATIC DIAGRAM

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KEPCO, INC.
REGULATED POWER SUPPLY

1.1 DESCRIPTION AND SPECIFICATIONS

The series PAX is a modular DC Power Supply unit with exceptional electrical and mechanical versatility. A closed loop series regulating system with solid state active elements is used to maintain regulation and stability to within better than 0.05%. Provisions are made for remote control of output voltage by a variable resistance, conductance, or voltage, and for operation of the unit in a constant current mode. Remote sensing is included to enable maintenance of specified regulation at a remote load.

PAX MODEL:	7-1	15-0.75	21-0.5	36-0.3	72-0.15
VOLTS OUTPUT:	0-7V	0-15V	0-21V	0-36V	0-72V
AMPS OUTPUT:	0-1A	0-0.75A	0- 0.5A	0-0.3A	0-0.15A

....REGULATION:

LINE: Less than 0.05% or 1 mv output voltage change for 105-125V AC or 210-250V AC line variation, at any output voltage within the specified range.

LOAD: Less than 0.05% or 1 mv output voltage change, whichever is greater, for no load to full load change at any output voltage within the specified range.

....STABILITY:

Output voltage varies less than 0.05% or 3 mv, whichever is greater, over a period of 8 hours after warmup. Measured at constant line voltage, load and ambient temperature. (See "Controls").

....TEMPERATURE COEFFICIENT:

Output voltage changes less than 0.05% per °C. (See "Controls").

....RIPPLE:

Less than 0.25 mv rms.

....RECOVERY TIME:

50 microseconds.

....OUTPUT IMPEDANCE: Specified for each model with the load frequency range shown in the table. Above 10 kc include the reactive impedance of the effective series inductance as indicated.

PAX MODEL:	7-1	15-0.75	21-0.5	36-0.3	72-0.15
DC to 100 cps	0.004	0.01	0.025	0.06	0.25
100 cps to 1 kc	0.02	0.02	0.02	0.02	0.02
1 kc to 100 kc*	0.01+1 μh	0.01-1 μh	0.01+1 μh	0.01+1 μh	0.01+1 μh

*1 kc to 100 kc, ohms maximum plus microhenry effective series inductance.

SPECIFICATIONS, Current Regulation Mode, EXTERNAL SENSING

....OUTPUT RANGE:
Current regulation from 1 ma to 100% of the maximum rated current.

....COMPLIANCE:
Voltage compliance extends from zero to 100% of the maximum output voltage.

For any selected current value, the output voltage is automatically varied throughout the compliance range as required to regulate the output current through a variable load.

....REGULATION:
LINE: For 105-125V AC or 210-250V AC line variations, output current changes less than 0.1% when the specified voltage sample is maintained across the external sensing resistor.

LOAD: For the maximum change in load resistance, within the rated compliance range, output current changes less than 0.1% when the specified voltage sample is maintained across the external sensing resistor.

The sensing resistor is chosen to produce a one volt drop at the maximum operating current. A separate control is used externally to provide high resolution current adjustability over a 10:1 range.

....STABILITY:
Output current varies less than 0.1% or 1 ma, whichever is greater, over a period of 8 hours after warmup. Measured at constant line voltage, load and ambient temperature.

....TEMPERATURE COEFFICIENT:
Output current changes less than 0.1% per °C.

....RIPPLE:
Less than 0.1% of maximum current rms.

SPECIFICATIONS, General

....INPUT REQUIREMENTS:
105-125 or 210-250V AC, 50-440 cps single phase.

....AMBIENT OPERATING TEMPERATURE:
-20°C to +50°C maximum.

....STORAGE TEMPERATURE RANGE:
-40°C to +85°C maximum.

....ISOLATION VOLTAGE:
Up to 500 volts can be connected between the chassis and either output terminal.

....DIMENSIONS: Uncased: 2 1/2"H X 3 13/16"W X 12 13/16"D.
Cased: 2 11/16"H X 4 1/8"W X 13 3/16"D.

....WEIGHT: Uncased 3 pounds.
Cased 4 pounds.

....FINISH: Blue anodized aluminum.

....TERMINATIONS: 11-terminal barrier strip and provisions for a 12-point printed circuit connector including keying slot, for AC input, DC output, error sensing and programming control functions.

PERFORMANCE FEATURES

....CONTROLS:
PAX Modules are ordinarily supplied without controls. It is intended that external fixed or variable programming resistors be used to control the output. Optionally, a built-in trimmer can be provided for up to 20 volts adjustment range. Stability and temperature coefficient criteria require the use of high quality LTC, 20PPM wire wound elements for programming.

....PROGRAMMING:
Terminals provide for resistive voltage or current programming at approximately 1000 ohms per volt. Programming terminals are also provided for programming by means of remotely located voltage or current signals. Optionally, a built-in trimmer can be provided to adjust the control ratio over a 10% range so that exact value fixed programming resistances can be used conveniently.

....CURRENT LIMIT CONTROL:
A single turn control provides adjustable current limiting from 25% to 150% of rated full-load current.

....SHORT CIRCUIT PROTECTION:

Unique current limiting circuitry permits continuous operation into a short circuit without the aid of fuses, circuit breakers or relays. Output returns instantly to the operating voltage when the overload is removed.

....REMOTE ERROR SENSING:

Error sensing terminals enable specified regulation to be maintained directly at the load by compensating for voltage drops up to 0.5 volts across each load supply lead.

....SERIES/PARALLEL OPERATION:

Current limiting capability permits series or parallel operation. In parallel, units operate automatically to share a load by means of the current limiting feature.

....COOLING:

Heat removal is by natural convection, without blowers.

PANEL ADAPTER: RAP 6-1: 5 1/4"H X 2 25/32"W. For mounting 6 cased units in Rack Cabinet RA 6-6 (includes handle and fastener).

PANEL ADAPTER: RAP 7-1: 3 1/2"H X 4 7/32"W. For mounting 4 cased units in Rack Cabinet RA 7-4 (includes handle and fastener).

....STANDARD FINISH:

CABINET: Cadmium plate, cronak wash.
PANEL ADAPTER: Etched aluminum - brushed and coated.

RACK CABINET: RA 6-6: 5 1/4"H X 19"W X 13 3/4"D including RA6-6BP for mounting six units.
RA 7-4: 3 1/2"H X 19"W X 13 3/4"D including RA6-6BP for mounting four units.

Special back plates with mounted mating connectors for printed circuit board connectors adapt the Rack Cabinets for plug-in mounting of the PAX units.

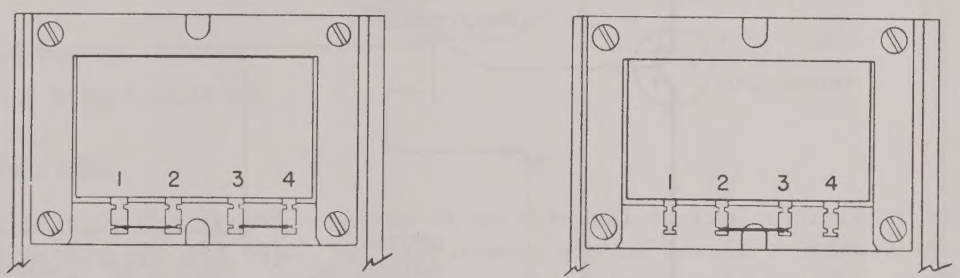
RA 6-6BP: for plug-in mounting of 6 units in Rack Cabinet RA 6-6.

RA 7-4BP: for plug-in mounting of 4 units in Rack Cabinet RA 7-4.

2.1 INSTALLATION AND OPERATING INSTRUCTIONS

This Power Supply has been completely inspected and tested at the factory prior to packing, and is shipped ready for installation and operation.

AC POWER. - The supply receives line power through its barrier terminals (1) & (2) and/or the companion printed board connecting tabs. The safety ground wire associated with the input power is connected to terminal (3). (See Fig. 2). As shipped, the unit is connected for 115 volt line operation with appropriate fusing. For 230 volt line input the transformer primary link connections are changed as per diagram below:



115 VOLT LINE
FUSE: 1A

230 VOLT LINE
FUSE: 0.5A

Fig. 1

GROUNDING. - The DC output is isolated from the AC power line and from any direct connection to chassis or ground. The positive side of the output is connected to chassis through a capacitor and series resistor. The maximum voltage that can be supported between either output terminal and chassis ground is 500 volts. Either side of the DC output may be grounded. Grounding connection is provided at barrier terminal (3) or companion printed circuit connecting tab.

DC LOAD TERMINALS. - The load may be connected to either the barrier terminals (5-minus) and (6-plus) or the companion printed circuit connecting tabs. The connecting leads should be carefully constructed, keeping in mind the voltage drops that can develop at high currents with wires of insufficient size or poor terminal connections. (See Remote Error Sensing).

MOUNTING DETAILS - See accessory layout drawing DM04136.

COOLING. - The unit is designed to have efficient convection cooling through its perforated heat sink and housing, and from the exposed metal surfaces. Ample ventilating space must be provided for proper circulation of cooling air. Avoid mounting adjacent to heat producing devices unless consideration is given to maintaining specified ambient temperature conditions.

TERMINAL LINKS. - The supply is shipped with three removable jumper links in place between terminals (4)-(5), (6)-(7), and (10)-(11) of the barrier strip. The terminal links and screws must be tightly secured to insure proper operation.

SIMPLIFIED DIAGRAM OF MODEL PAX POWER SUPPLY WITH REAR TERMINAL CONNECTION DETAIL

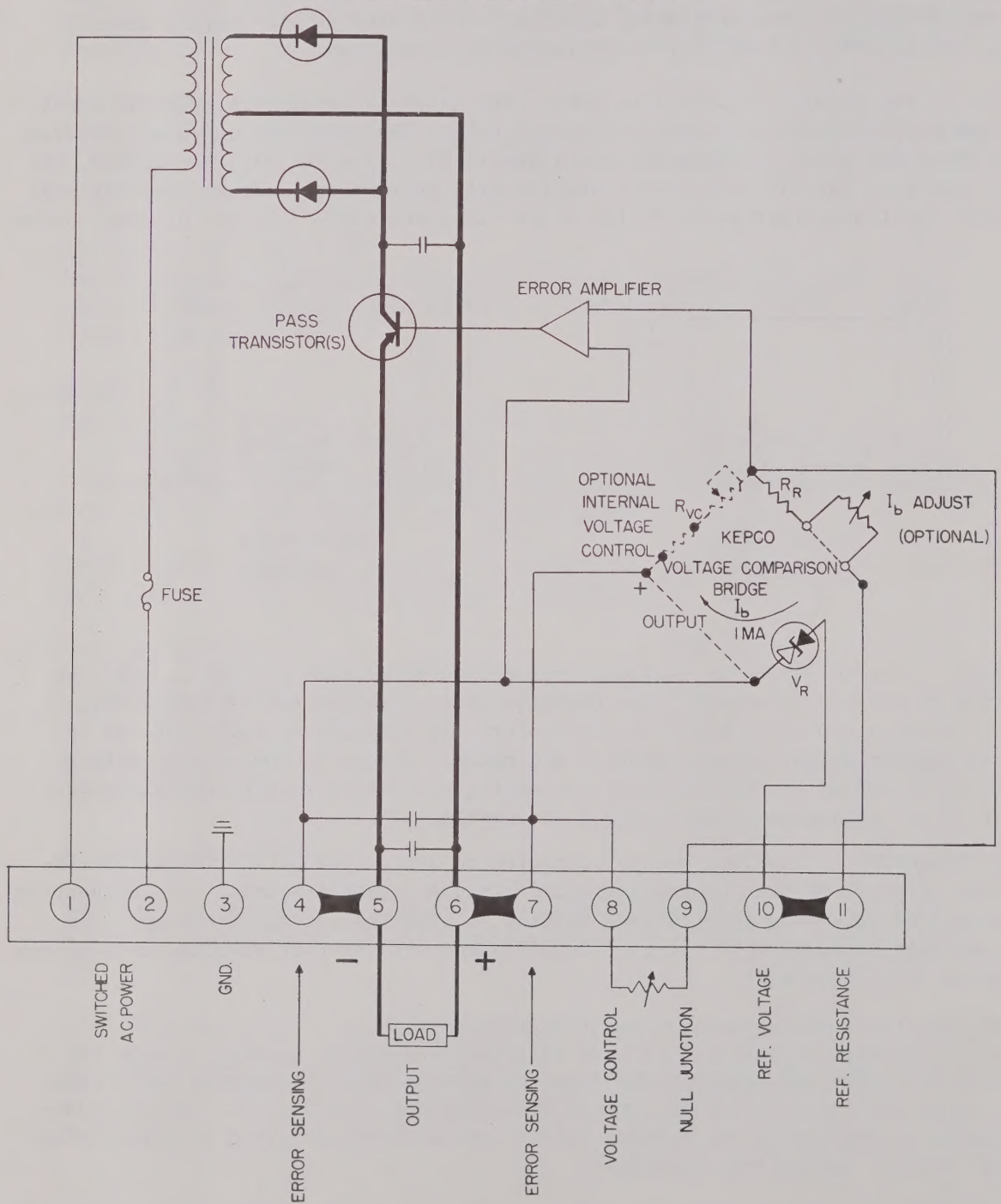
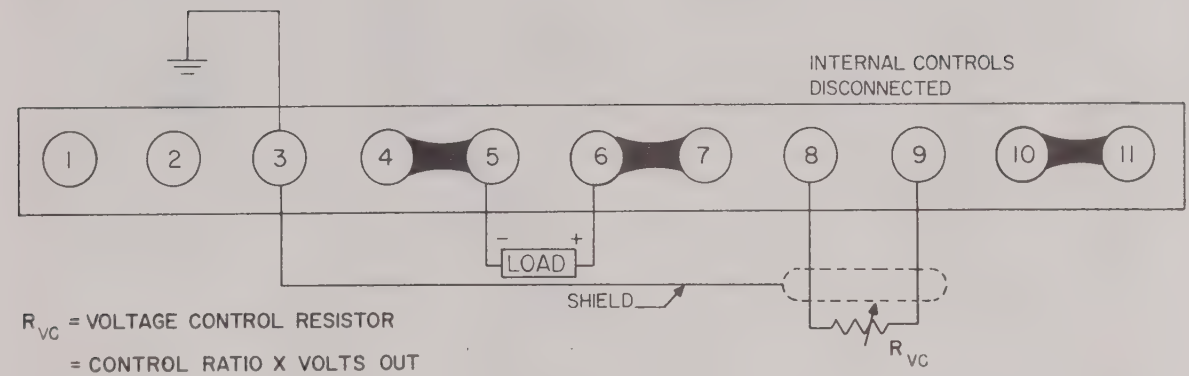


Fig. 2

PROGRAMMING OUTPUT VOLTAGE WITH RESISTANCE



R_{VC} = VOLTAGE CONTROL RESISTOR

= CONTROL RATIO X VOLTS OUT

$$V_o = \frac{R_{VC}}{\text{CONTROL RATIO}}$$

Fig. 3

Output voltage is programmed by means of an external control resistance connected across terminals (8) and (9). This resistance may be fixed, continuously adjustable, stepped, or a combination of resistances to control the full range of output voltage or a part thereof. There is a fixed resistor as a voltage control shipped with the power supply. The power supply will not function without the voltage control.

Control resistance is related to the output voltage by the control ratio of the voltage comparison bridge. For PAX series Power Supplies, the control ratio is 1000 ohms per volt based on a one milliampere bridge control current. The bridge current is factory set somewhat higher than 1 ma to permit precise adjustment by the insertion of a resistance (bridge current adjusting control) between terminals (10) and (11) with the link removed. (An optional bridge current adjust control may be internally connected).

A shielded, twisted wire pair for remote connection of the control resistance is required, with the shield grounded to chassis through terminal (3).

For a series of fixed control resistors, which are to be switched for stepping the output voltage, shorting type transfer contacts (make before break) are necessary to prevent switching transients. While the current through the programming resistors is 1 milliampere steady state, the current will rise to high peak values while programming rapid voltage steps. When programming large excursions of voltage by means of rapid switching, the use of high wattage programming resistors (particularly for the lower voltages) to absorb the energy stored in the output capacitor is recommended. This is of special importance when the supply is lightly loaded.

The basic relationship governing the control of output voltage is expressed by,

$$\frac{V_o}{V_r} = \frac{R_{vc}}{R_r}$$

See Voltage Comparison Bridge Diagram (Fig. 2) Page 2.2

REMOTE ERROR SENSING

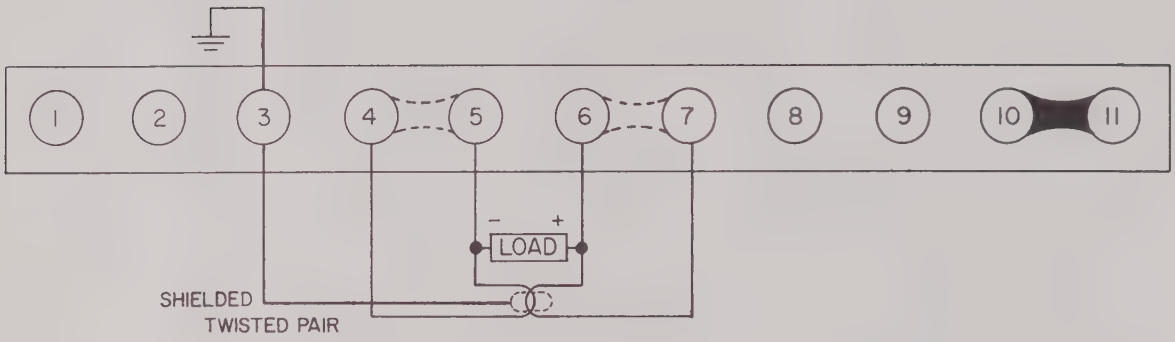


Fig.4

The error sensing terminals (4) and (7) are the input connections to the supply's regulating system and are normally connected to the output terminals (5) and (6) to maintain specified performance at these points. Since voltage drops across the resistance in the load connecting wires will degrade regulation at the load, the error sensing connection is made directly at the load to compensate for the voltage drop in the leads. Up to 0.5 volt in each lead can be compensated for using Remote Error Sensing.

PROCEDURE:

1. Remove the jumper links between terminals (4)-(5) and (6)-(7).

2. Use a twisted wire pair, preferably shielded, to connect terminal (4) to the negative side of the load and terminal (7) to the positive side of the load. The use of twisted load wires to terminals (5) and (6) is recommended to reduce the wiring inductance and thus improve the transient recovery time and to enhance stability of operation.

   NOTE: An accidental open circuit in the remote sensing circuit will sharply degrade the regulating function and cause the output voltage and ripple to rise. In addition, an open load circuit leaving the error sensing terminals connected to the load may be damaging to the supply since the load current will flow through the sensing circuit.

   When using Remote Error sensing, the power supply should be OFF when load and sensing connections are being made. Alternatively, be sure to connect the load before connecting the sensing wires and conversely, remove the sensing wires before removing the load leads.

CONSTANT CURRENT OPERATION

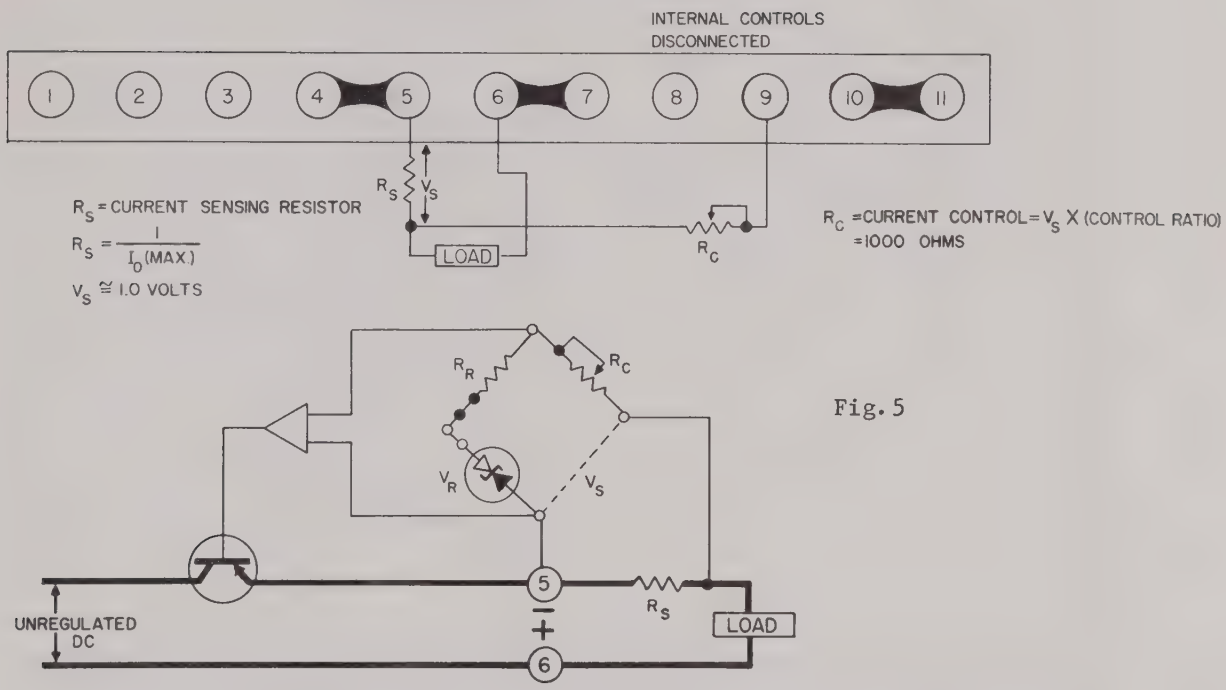


Fig. 5

In the constant current operating mode the voltage comparison bridge is interconnected with an external current sensing resistor, R_S, and a current control, R_C, (as shown above) to maintain a constant voltage drop across R_S. In this way an adjustable constant load current is obtained.

Characteristic of the constant current supply is the ability to change its output voltage automatically in order to maintain a constant current through a range of possible load resistances. The range of output voltage that the supply can deliver and maintain constant current is referred to as the "COMPLIANCE VOLTAGE".

The current sensing resistor, R_S, is chosen to develop approximately a one volt drop at maximum current. It is calculated by dividing the maximum rated current into one volt. However, its actual value is not critical and can be the nearest lower value available, since the desired current is selected by the current control, R_C. To maintain a given current setting, R_S must be a low temperature coefficient resistor with a wattage rating of at least 10 times its actual dissipation. Current control, R_C, should also be a low temperature coefficient resistor.

Additional control over the output is afforded by modulation of either the reference current or the use of external voltage programming (see Fig. 6).

PROGRAMMING OUTPUT VOLTAGE WITH EXTERNAL VOLTAGE

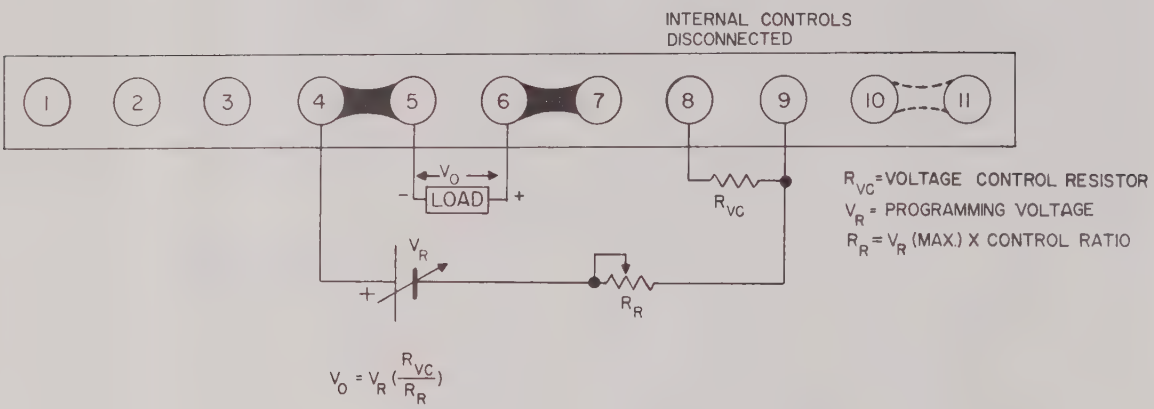


Fig. 6

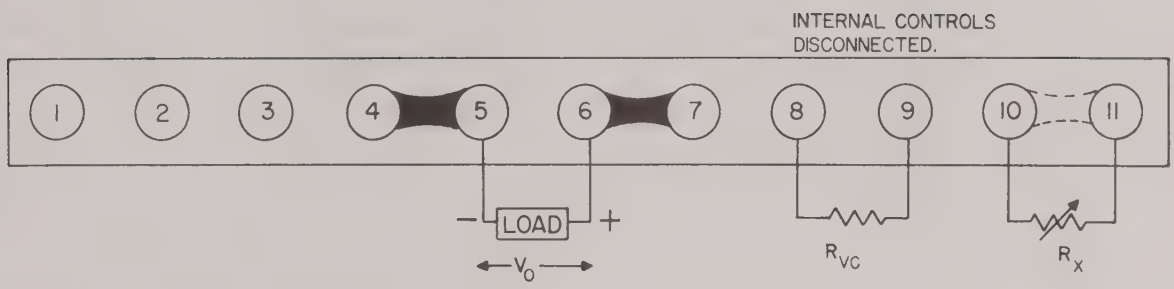
In programming the output with an external voltage, the internal reference voltage and associated reference resistor, R_r, is disconnected from the voltage comparison bridge by removing the link from (10) and (11). An external voltage source, V_r, and reference resistor R_r, is connected into the bridge circuit as shown above.

The relationship between output and input voltage is expressed by,

$$\frac{V_o}{V_r} = \frac{R_{vc}}{R_r}$$

$$\text{with } R_R = \frac{V_r \text{ (max.)}}{\text{Bridge Current (1 ma.)}}$$

PROGRAMMING OUTPUT VOLTAGE WITH CONDUCTANCE



$$R_X = \frac{1}{\text{PROGRAMMING CONDUCTANCE}}$$

R_R = INTERNAL REFERENCE RESISTOR

V_R = INTERNAL REFERENCE VOLTAGE

$$V_O = V_R(R_{VC}) \cdot \frac{1}{R_R + R_X}$$

An external variable resistance, R_x, introduced in series with the internal reference voltage through terminals (10) and (11) alters the bridge current to effect a change in output voltage. The relationship governing this method of output control is,

$$V_o = V_r \frac{R_{vc}}{R_r + R_x}$$

with the bridge current, $ib = \dfrac{V_r}{R_r + R_x}$

REPLACEMENT PARTS LIST

POWER SUPPLY MODEL PAX 7-1 Code 7-964

SCHEMATIC NO.	QTY.	DESCRIPTION	MFRS. NAME & PART NO. (See Note)	KEPCO PART NO.
Q101, 102	2	Transistor, PNP	Delco	**119-0016
R101	1	Resistor, Fixed, Power, Strip 1.5 K ohm, 10 w, 5%	Hardwick Hindle B-360	115-1159
R102	1	Resistor, Fixed, Power, Strip 800 ohm, 10 w, 5%	Hardwick Hindle 3/4 BRS-56	115-1594
T101	1	Transformer	Kepco Magnetics	100-1411

**See Field Replacement Page

REPLACEMENT PARTS MAY BE ORDERED FROM KEPCO, INC. ORDERS SHOULD INCLUDE KEPCO PART NUMBER AND DESCRIPTION.

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kepco inc. ® REPLACEMENT PARTS LIST

PRINTED CIRCUIT BOARD MODEL PAX 7-1 Code 7-964

SCHEMATIC NO.	QTY.	DESCRIPTION	MFRS. NAME & PART NO. (See Note)	KEPCO PART NO.
C201	1	Capacitor, Electrolytic, Pigtail 80 µf, 120 v	General Electric 43F7515AA1	117-0427
C202, 206	2	Capacitor, Mylar 0.01 µf, 200 v, 10%	Sprague Electric 192P10302	117-0353
C203	1	Capacitor, Electrolytic, Pigtail 500 µf, 10 v	General Electric 43F7572AA1	117-0428
C204, 209	2	Capacitor, Electrolytic, Pigtail 1200 µf, 25 v	General Electric 43F7575AA1	117-0429
C205	1	Capacitor, Electrolytic, Pigtail 600 µf, 25 v	General Electric 43F7576AA1	117-0433
C207	1	Capacitor, Mylar 0.1 µf, 600 v, 20%	Hopkins Eng. P16M	117-0316
C208	1	Capacitor, Electrolytic, Pigtail 68 µf, 25 v, 20%	General Electric 76F02KL680	117-0437
C210	1	Capacitor, Mylar 0.2 µf, 200 v, 10%	Hopkins Eng. P22MK	117-0236
C211	1	Capacitor, Electrolytic, Pigtail 27 µf, 15 v, 20%	General Electric 76F02FD220	117-0444
CR201, 202, 204, 205, 206, 207	6	Rectifier, Silicon, Pigtail	Automatic PT-5	124-0028
CR203	1	Rectifier, Silicon, Pigtail	Columbus CEC-105	124-0133
CR208	1	Zener Diode	Motorola 1N3026B	121-0036
CR209	1	Zener Diode	International Rect. 1N821	121-0041
CR210	1	Rectifier, Germanium, Pigtail	General Electric 1N91	122-0007
CR211, 212	2	Rectifier, Silicon, Pigtail	Electronic Devices	124-0178
F201	1	Fuse, Slo Blo 1 a	Bussman MDL-1	141-0047
Q201, 203	2	Transistor, Silicon, NPN	General Electric	**119-0054
Q202, 204	2	Transistor, Silicon, PNP	Hughes	**119-0055
R201	1	Resistor, Fixed, Molded 1.5 K ohm, 1/2 w, 10%	Allen Bradley EB1521	115-0578
R202	1	Resistor, Fixed, Molded 1.3 K ohm, 1/2 w, 5%	Allen Bradley EB1325	115-1600
R203	1	Resistor, Varible, Composition 500 ohm, 1/4 w, 30%	C.T.S. V-151	115-1605

**See Field Replacement Page

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SCHEMATIC NO.	QTY.	DESCRIPTION	MFRS. NAME & PART NO. (See Note)	KEPCO PART NO.
R204, 215	2	Resistor, Fixed, Precision, WW 1.5 K ohm, 3 w, 3%	Tepro Electric TS-3W	115-1601
R205	1	Resistor, Fixed, Molded 2.7 K ohm, 1/2 w, 10%	Allen Bradley EB2721	115-0560
R206	1	Resistor, Fixed, Power, Axial 10 ohm, 3 w, 5%	Ward Leonard 3X10	115-0421
R207	1	Resistor, Fixed, Molded 15 K ohm, 1/2 w, 10%	Allen Bradley EB1531	115-1152
R208	1	Resistor, Fixed, Molded 1 K ohm, 1/2 w, 10%	Allen Bradley EB1021	115-0547
R209	1	Resistor, Fixed, Molded 39 K ohm, 1/2 w, 10%	Allen Bradley EB3931	115-1137
R211	1	Resistor, Fixed, Precision, WW 5.7 K ohm, 1 w, 1%	Tepro Electric TS-1W	115-1301
R212	1	Resistor, Fixed, Molded 100 ohm, 1/2 w, 10%	Allen Bradley EB1011	115-0626
R213	1	Resistor, Fixed, Molded 27 ohm, 1/2 w, 10%	Allen Bradley EB2701	115-0861
R214	1	Resistor, Fixed, Molded 1.2 K ohm, 1/2 w, 10%	Allen Bradley EB1221	115-1129
R216	1	Resistor, Fixed, Power, Axial 10 K ohm, 3 w, 5%	IRC Type 8000	115-0460
R217	1	Resistor, Fixed, Molded 82 ohm, 1/2 w, 10%	Allen Bradley EB8201	115-0941
R219, 225, 226	3	Resistor, Fixed, Power, Axial 0.5 ohm, 3 w, 5%	Ward Leonard 7/16 Q-0.5	115-0504
R222	1	Resistor, Fixed, Molded 10 ohm, 1/2 w, 10%	Allen Bradley EB1001	115-0502
R223	1	Resistor, Fixed, Power, Axial 300 ohm, 3 w, 5%	Ward Leonard 3X300	115-0444
R224	1	Resistor, Fixed, Molded 12 K ohm, 1/2 w, 10%	Allen Bradley EB1231	115-1168
R227	1	Resistor, Fixed, Molded 470 ohm, 1/2 w, 10%	Allen Bradley EB4711	115-0608

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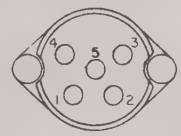
FIELD REPLACEMENT LIST

Kepco Part No.	Description	Recommended Replacement MFR.	MFR. No.
119-0003 119-0016	Transistor PNP	Delco	2N174
119-0022	Transistor PNP	Tung Sol Texas Instrument	2N1707 2N404
119-0034	Transistor PNP	Delco Hughes	2N1172 2N1131A
119-0035, 0036,0037	Transistor PNP	Motorola Clevite	2N1167 CTP 3553
119-0048	Transistor Unijunction	General Electric	2N1671A
119-0020	Transistor PNP	RCA	2N398A
119-0038	Transistor NPN	Transitron	ST29
119-0004	Transistor PNP	Delco	2N277
119-0024	Transistor NPN	General Inst. RCA, General Elec. Texas Instrument Sylvania, Texas Instrument	2N1605 2N388 2N1308
119-0049	Transistor PNP	Delco	2N669
119-0054	Transistor NPN	General Electric	2N338 2N336A
119-0055	Transistor PNP	Hughes	2N1131A

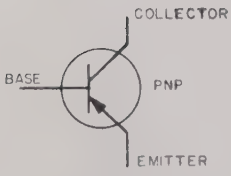
PCB-1 V/I CONTROL BOARD

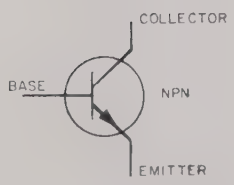
PCB-2 SCR CONTROL BOARD

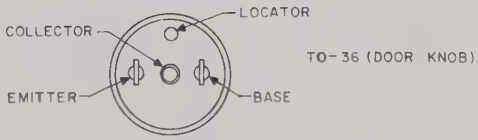
PLUG IN DRIVER AND PASS ASSEMBLIES - CHASSIS SOCKET VIEW

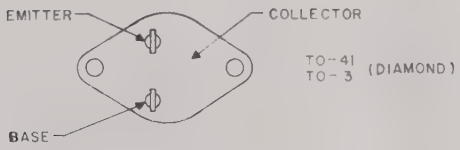


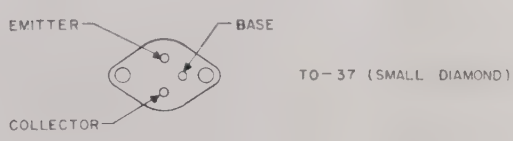
TRANSISTORS





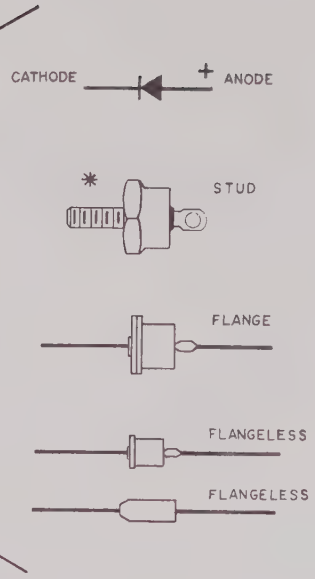






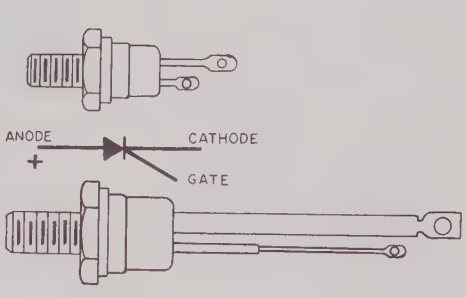
TERMINAL DESIGNATIONS OF CONNECTORS AND COMPONENTS

POWER RECTIFIERS

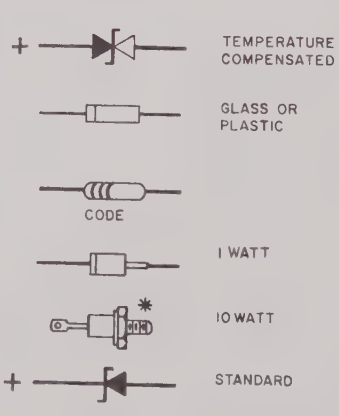


* REVERSE POLARITY DESIGNATED BY SUFFIX R ON TYPE NUMBER

SILICON CONTROLLED RECTIFIERS



ZENERS

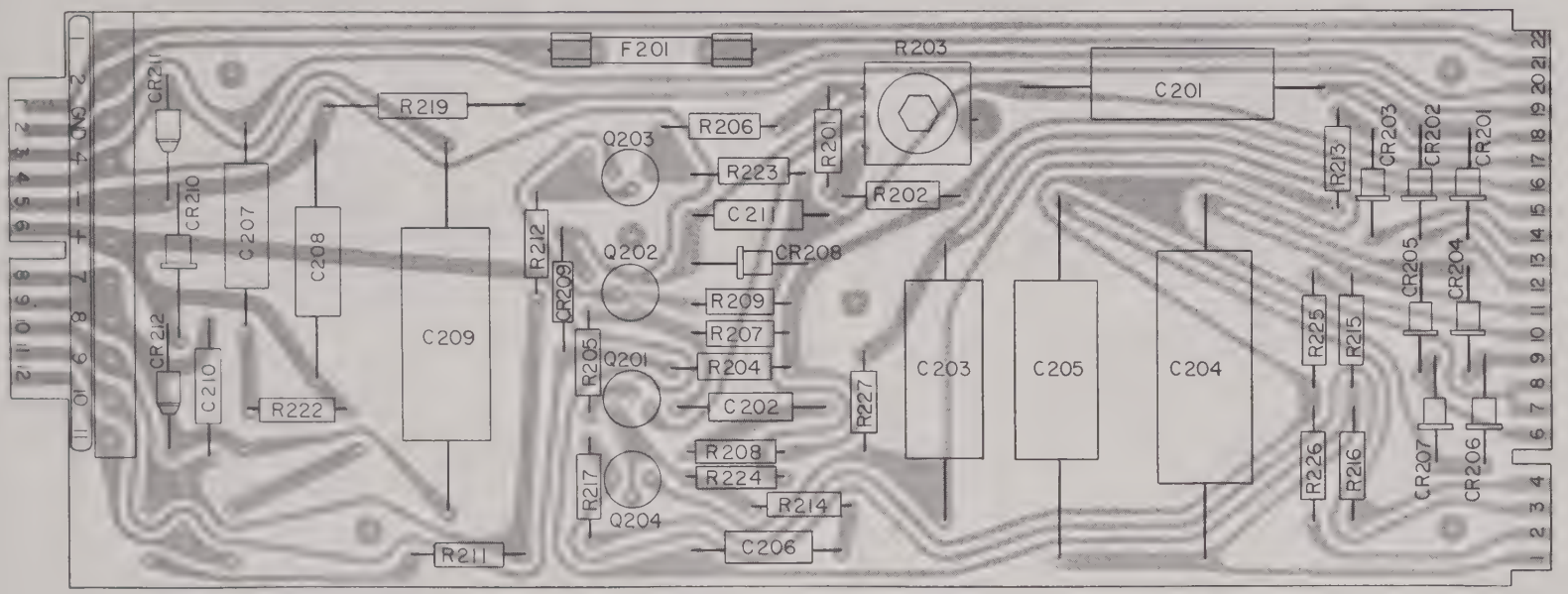


* REVERSE POLARITY DESIGNATED BY SUFFIX R ON TYPE NUMBER

UNIJUNCTION

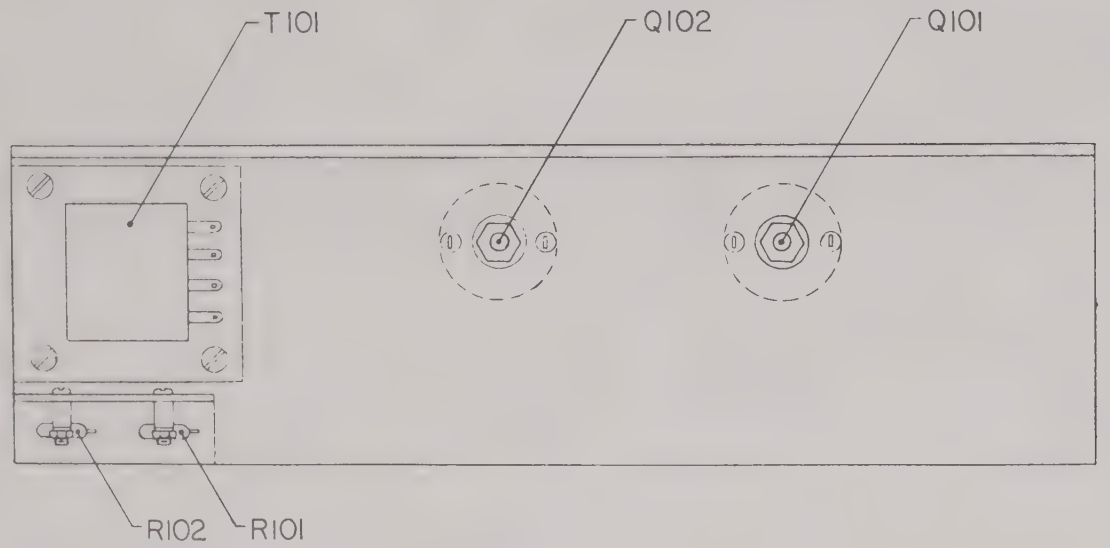
TERMINAL DESIGNATIONS OF CONNECTORS AND COMPONENTS

CM04161



NOTE:
USED FOR MODELS
PAX 7-1
PAX 15-0.75
PAX 21-0.5
PAX 36-0.3

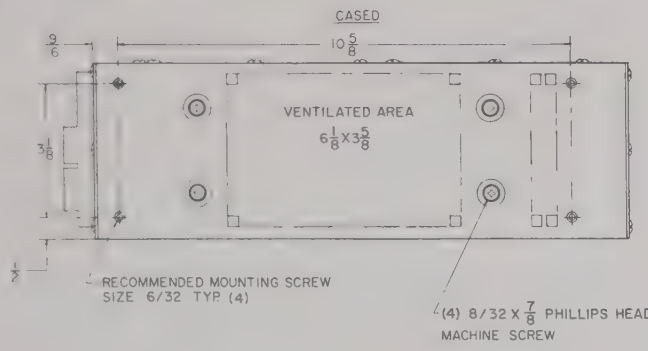
KEPCO INC. FLUSHING, N.Y.			
TITLE: COMPONENT LOCATION PCB-1			
DRAWN: H.S.V.	CHECKED:	APPROVED:	DATE: 5-22-64
MODEL NO: SEE NOTE		PART NO:	SCALE:
DWG NO: CM04161			

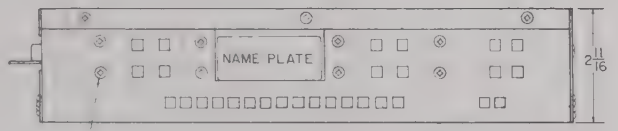


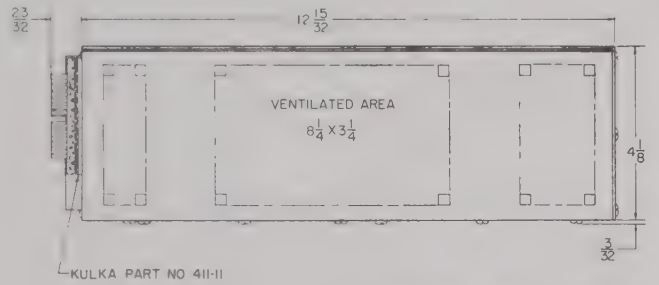
NOTE:

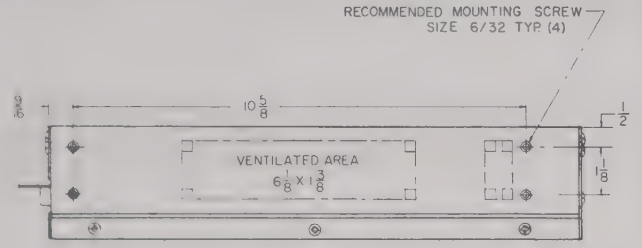
USE FOR
PAX 7-1
PAX 15-0.75
PAX 21-0.5
PAX 36-0.3

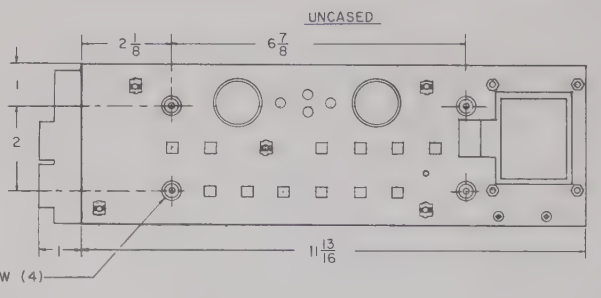
KEPCO INC. FLUSHING, N.Y.			
TITLE: COMPONENT LOCATION			
DRAWN: HSV	CHECKED:	APPROVED:	DATE: 5-27-64
MODEL NO.: SEE NOTE		PART NO.:	SCALE: NONE
DWG. NO. BM04168			

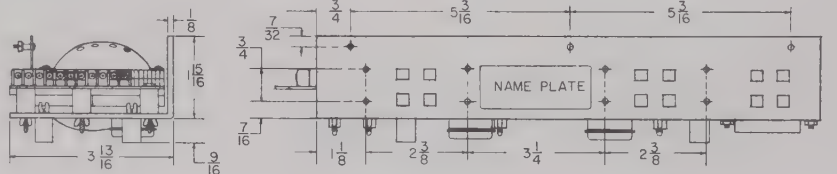


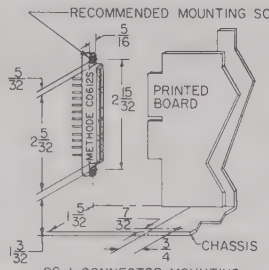


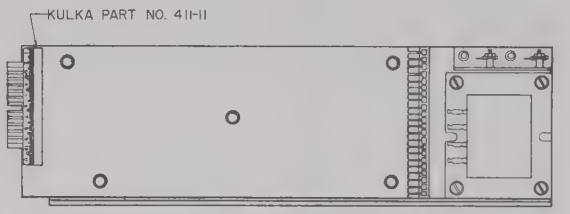












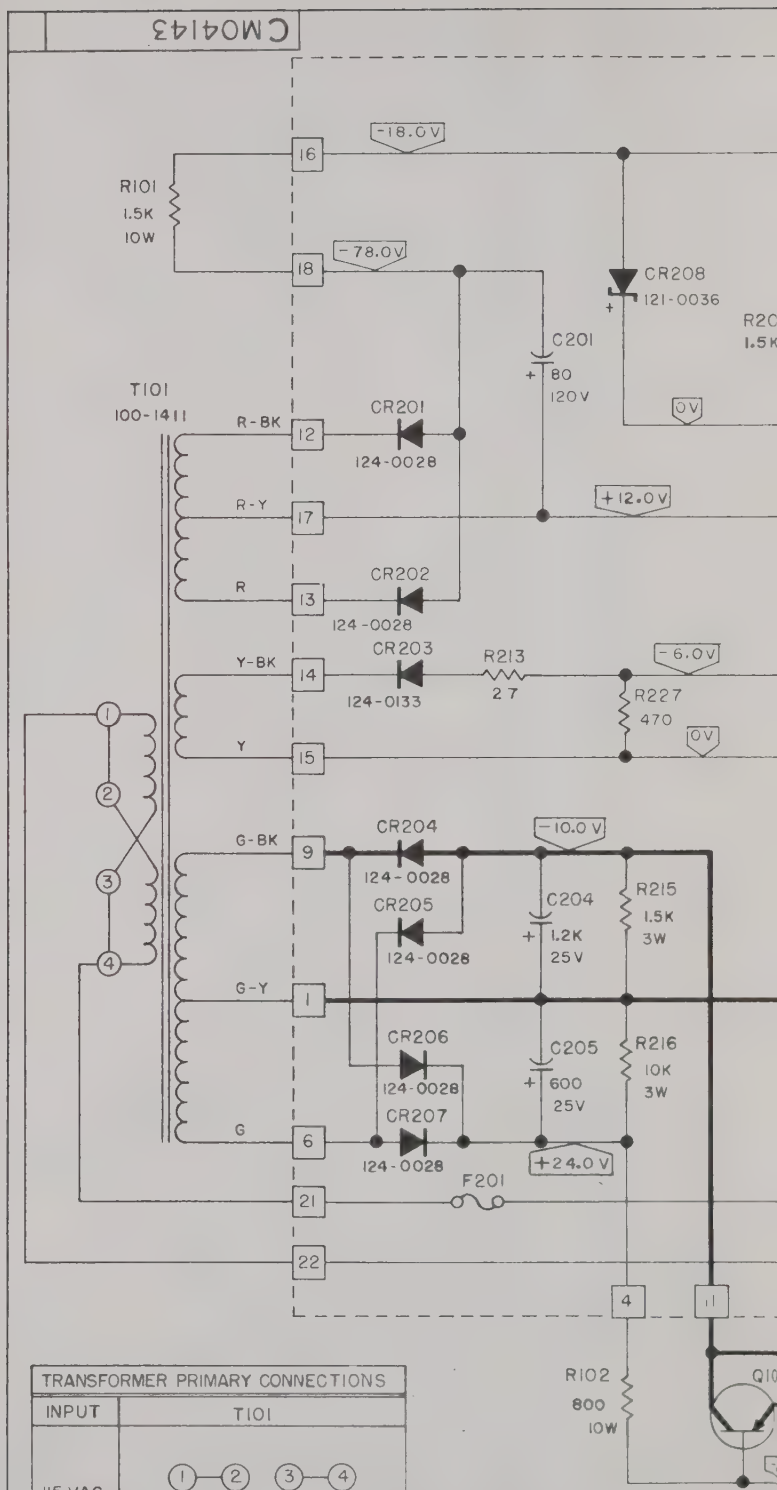
NOTES:
1. THIS DRAWING USED FOR PAX 36-0.3, PAX 7-1, PAX 15-0.75, PAX 21-0.5, PAX 72-015, PAX 100-01
2. MATERIAL, COVER #16 GAUGE ALUM. HEAVY ANODIZED, BLUE FINISH CHASSIS 1/8 THICK ALUM #3003-H14 HEAVY ANODIZED, BLUE FINISH
3. REFER TO KEPCO CATALOG FOR DETAILED SPECIFICATIONS

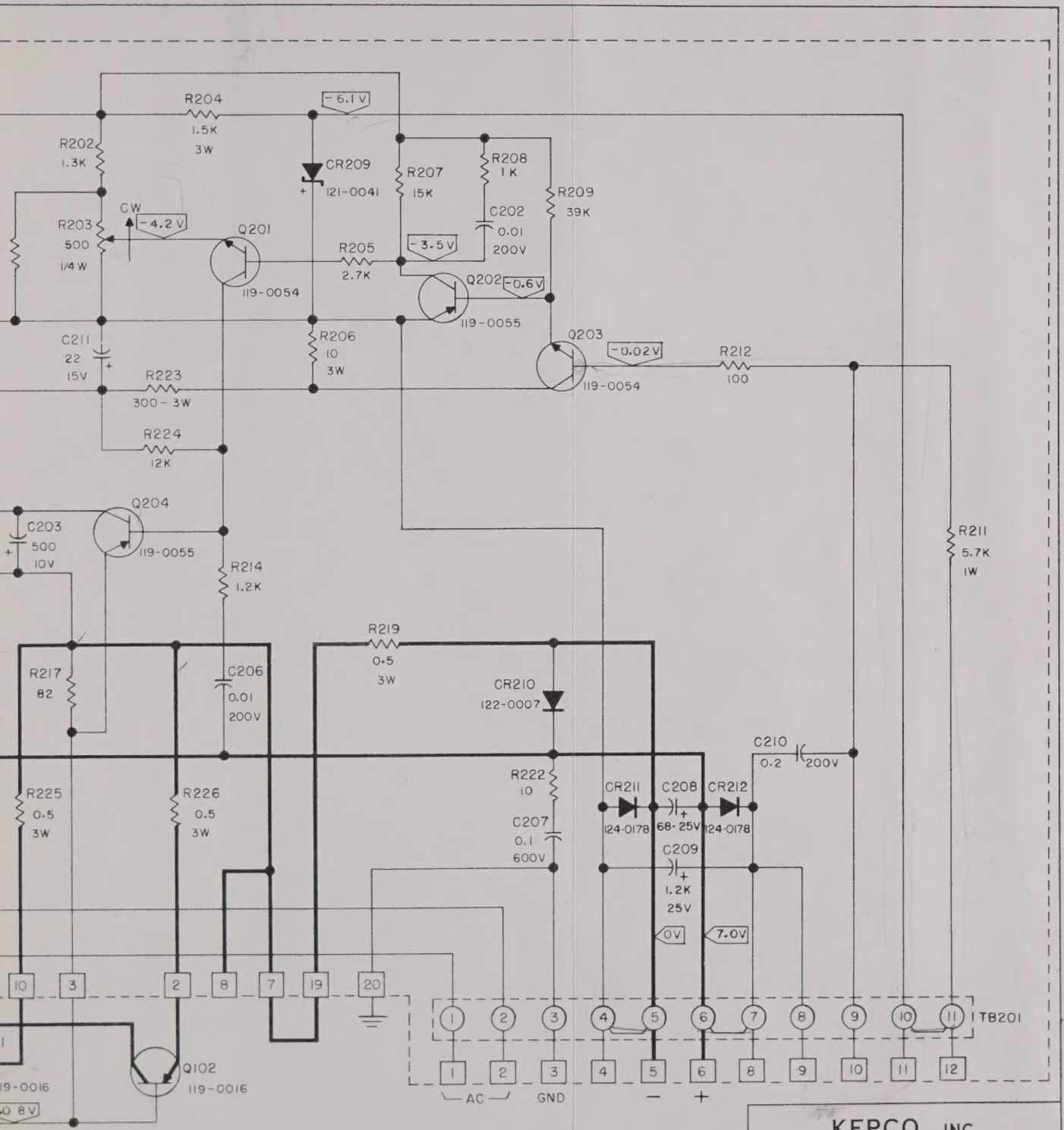
PC-1 CONNECTOR FUNCTION	TERMINAL BD FUNCTION	
	1	1 — SWITCHED AC POWER
	2	2 — SWITCHED AC POWER
	3	3 GND
	4	4 MINUS ERROR SENSING
	5	5 MINUS OUTPUT
	6	6 PLUS OUTPUT
	8	7 PLUS ERROR SENSING
	9	8 VOLTAGE CONTROL
	10	9 NULL JUNCTION
	11	10 REF. VOLTAGE
	12	11 REF. RESISTANCE

FOR ALTERNATE CONNECTIONS SEE KEPCO MANUAL

	FUSE DATA		
MODEL	FUSE SIZE	115 VAC	230 VAC
PAX 36-0.3	F 2.0 1	1 AMP	0.5 AMP
PAX 7-1	F 2.0 1	1 AMP	0.5 AMP
PAX 15-0.75	F 2.0 1	0.5 AMP	0.3 AMP
PAX 21-0.5	F 2.0 1	1 AMP	0.5 AMP
PAX 72-015	F 2.0 1	1 AMP	0.5 AMP
PAX 100-01	F 2.0 1	1 AMP	0.5 AMP

KEPCO INC.
FLUSHING, N.Y.
OUTLINE DRAWING
BKG | 12 | 12 4-64
SEE NOTE-1
EM04589


CM04143
-18.0V
16
R101
1.5K
10W
-78.0V
18
CR208
121-0036
C201
80
120V
0V
T101
100-1411
R-BK
12
CR201
124-0028
+12.0V
R-Y
17
R
13
CR202
124-0028
Y-BK
14
CR203
124-0133
R213
27
-6.0V
R227
470
0V
Y
15
G-BK
9
CR204
124-0028
-10.0V
CR205
124-0028
C204
1.2K
25V
R215
1.5K
3W
G-Y
1
CR206
124-0028
C205
600
25V
R216
10K
3W
CR207
G
6
124-0028
+24.0V
F201
21
22
4
1
R102
800
10W
TRANSFORMER PRIMARY CONNECTIONS
INPUT
T101
115 VAC
F201: 1A SLO BLO
230VAC
F201: 0.5A SLO BLO
NOTES:
1. ALL RESISTORS ARE 1/
ALL CAPACITOR VALUES
2. VOLTAGES ARE DC, TY
AC LINE 115V; OUTPUT
3. ALL COMPONENTS WI
4. ORDER REPLACEMENT



2WATT UNLESS OTHERWISE SPECIFIED; VALUES IN OHMS, K=1000 OHMS.
IN MICROFARADS. K=1000 MICROFARADS.
PICAL VALUE, & MEASURED TO (-) DC OUTPUT TERMINAL WITH 20K/V METER;
SET TO MAXIMUM VDC WITH NO LOAD.
THIN DOTTED LINE ARE LOCATED ON PRINTED CIRCUIT BOARD.
PARTS BY KEPCO PART NUMBER. SEE PARTS LIST.

KEPCO INC.
FLUSHING, N.Y.

TITLE: SCHEMATIC POWER SUPPLY

DRAWN	CHECKED	APPROVED	DATE
G.D.S.			5-19-64
MODEL NO. PAX 7-1		PART NO.	SCALE

DWG. NO. CM04143

131-38 SANFORD AVENUE • FLUSHING, N.Y. 11352 • Phone (212) IN 1-7000
TWX# 212-539-6623 • Cable Address: KEPCOPOWER NEWYORK

#146-0045-10/63-12M